

IN THE CLAIMS

1. A system for accessing a surgical target site, comprising:
a distraction assembly for creating a distraction corridor to said surgical target
5 site; and
a retractor assembly having a plurality of retractor blades dimensioned to be
introduced simultaneously over said distraction assembly to said surgical target site
and thereafter actuated to create and maintain an operative corridor to said surgical
target site.
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2. The system of claim 1, wherein said distraction assembly includes an initial
dilator capable of being slideably passed over a K-wire to perform initial distraction.
3. The system of claim 1, wherein said distraction assembly includes a plurality
15 of sequential dilators.
4. The system of claim 2, wherein said initial dilator is a split dilator capable of
being split after introduction to perform said initial distraction.
- 20 5. The system of claim 1, wherein said retractor assembly includes at least one
shim member to be coupled to at least one of said retractor blades, said shim member
including an extension dimensioned to extend past said retractor blade into the
surgical target site.
- 25 6. The system of claim 5, wherein at least one of said distraction assembly, one
of said retractor blades, and said at least one shim member includes at least one
stimulation electrode.

7. The system of claim 6, further comprising a control unit capable of electrically stimulating said at least one stimulation electrode, sensing a response of a nerve depolarized by said stimulation, determining a direction from at least one of said initial distraction system, one of said retractor blades, and said at least one shim member to the nerve based upon the sensed response, and communicating said direction to a user.
8. The system of claim 7, further comprising an electrode configured to sense a neuromuscular response of a muscle coupled to said depolarized nerve, the electrode being operable to send the response to the control unit.
9. The system of claim 2, wherein said K-wire has a first stimulation electrode at a distal tip of the K-wire.
10. The system of claim 1, wherein said system for establishing an operative corridor to a surgical target site is configured to access a spinal target site.
11. The system of claim 1, wherein said system for establishing an operative corridor to a surgical target site is configured to establish said operative corridor via at least one of a posterior, anterior, postero-lateral, and a lateral, trans-psoas approach.
12. The system of claim 7, further comprising a handle coupled to at least one of said initial distraction assembly, one of said retractor blades, and said at least one shim member, the handle having at least one button for initiating the electrical stimulation from said control unit to said at least one stimulation electrode.

13. The system of claim 7, wherein the control unit comprises a display operable to display an electromyographic (EMG) response of the muscle.
14. The system of claim 7, wherein the control unit comprises a touch-screen display operable to receive commands from a user.
15. The system of claim 7, wherein the stimulation electrodes are positioned near a distal end of at least one of the initial distraction system, one of said retractor blades, and said at least one shim member.
16. A method of accessing a surgical target site, comprising the steps of:
creating a distraction corridor to the surgical target site;
simultaneously introducing a plurality of retractor blades into said distraction corridor; and
opening said plurality of retractor blades to create an operative corridor to said surgical target site.
17. The method of claim 16, wherein said step of creating a distraction corridor is accomplished by using a K-wire and at least one dilator capable of being slideably passed over said K-wire.
18. The method of claim 16, wherein said step of distracting from said distraction corridor includes performing a secondary distraction system.
19. The method of claim 17, wherein said step of performing secondary distraction system is accomplished by using a sequential dilation system.

20. The method of claim 16, further comprising the step of providing a control unit capable of electrically stimulating said at least one stimulation electrode, sensing a response of a nerve depolarized by said stimulation, determining a direction from a surgical accessory to the nerve based upon the sensed response, and communicating
- 5 said direction to a user.